

# Exhibit F

Query= SEQ ID NO:1  
(8262 letters)

Sequences producing significant alignments:	Score (bits)	E Value
AP002768.3.1.186084	<u>3205</u>	0.0
AP002957.2.1.87834	<u>541</u>	e-150
AP002515.3.1.166063	<u>509</u>	e-141

>AP002768.3.1.186084  
Length = 186084

Score = 3205 bits (1617), Expect = 0.0  
Identities = 1617/1617 (100%)  
Strand = Plus / Minus

Query: 5744 agtccatggtgctgctactacacagccagaggcagtatatctttgagttcgacaagaatg 5803  
|||||  
Sbjct: 40097 agtccatggtgctgctactacacagccagaggcagtatatctttgagttcgacaagaatg 40038

Query: 5804 accgcctctcttctgtgacgatgccccacgtggcgcggcagacactagagaccatccgct 5863  
|||||  
Sbjct: 40037 accgcctctcttctgtgacgatgccccacgtggcgcggcagacactagagaccatccgct 39978

Query: 5864 cagtgggctactacagaaacatctatcagccccctgagggcaatgcctcagtcatacagg 5923  
|||||  
Sbjct: 39977 cagtgggctactacagaaacatctatcagccccctgagggcaatgcctcagtcatacagg 39918

Query: 5924 acttcactgaggatgggcacctccttcacaccttctacctgggcactggccgcaggggtga 5983  
|||||  
Sbjct: 39917 acttcactgaggatgggcacctccttcacaccttctacctgggcactggccgcaggggtga 39858

Query: 5984 tatacaagtatggcaaactgtcaaagctggcagagacgctctatgacaccaccaaggtca 6043  
|||||  
Sbjct: 39857 tatacaagtatggcaaactgtcaaagctggcagagacgctctatgacaccaccaaggtca 39798

Query: 6044 gtttcacctatgacgagacggcaggcatgctgaagaccatcaacctacagaatgaggggct 6103  
|||||  
Sbjct: 39797 gtttcacctatgacgagacggcaggcatgctgaagaccatcaacctacagaatgaggggct 39738

Query: 6104 tcacctgcaccatccgctaccgtcagattgggcccctgattgaccgacagatcttccgct 6163  
|||||  
Sbjct: 39737 tcacctgcaccatccgctaccgtcagattgggcccctgattgaccgacagatcttccgct 39678

Query: 6164 tcaactgaggaaggcatgggtcaacgcccgttttgactacaactatgacaacagcttccggg 6223  
|||||  
Sbjct: 39677 tcaactgaggaaggcatgggtcaacgcccgttttgactacaactatgacaacagcttccggg 39618

Query: 6224 tgaccagcatgcaggctgtgatcaacgagacccccactgcccattgatctctatcgctatg 6283  
|||||  
Sbjct: 39617 tgaccagcatgcaggctgtgatcaacgagacccccactgcccattgatctctatcgctatg 39558

Query: 6284 atgatgtgtcaggcaagacagagcagtttgggaagtttggtgtcatttactatgacatta 6343  
|||||  
Sbjct: 39557 atgatgtgtcaggcaagacagagcagtttgggaagtttggtgtcatttactatgacatta 39498

Query: 6344 accagatcatcaccacagctgtcatgaccacaccaagcattttgatgcatatggcagga 6403  
|||||  
Sbjct: 39497 accagatcatcaccacagctgtcatgaccacaccaagcattttgatgcatatggcagga 39438

Query: 6404 tgaaggaagtgcagtatgagatcttccgctcgctcatgtactggatgaccgtccagtatg 6463  
|||||  
Sbjct: 39437 tgaaggaagtgcagtatgagatcttccgctcgctcatgtactggatgaccgtccagtatg 39378

Query: 6464 ataacatggggcgagtagtgaagaaggagctgaaggtaggaccctacgccaataccactc 6523  
|||||  
Sbjct: 39377 ataacatggggcgagtagtgaagaaggagctgaaggtaggaccctacgccaataccactc 39318

Query: 6524 gctactcctatgagtatgatgctgacggccagctgcagacagtctccatcaatgacaagc 6583  
|||||  
Sbjct: 39317 gctactcctatgagtatgatgctgacggccagctgcagacagtctccatcaatgacaagc 39258

Query: 6584 cactctggcgctacagctacgacctcaatgggaacctgcacttactgagccctgggaaca 6643  
|||||  
Sbjct: 39257 cactctggcgctacagctacgacctcaatgggaacctgcacttactgagccctgggaaca 39198

Query: 6644 gtgcacggctcacaccactacgggtatgacatccgcgaccgcatcactcggctgggtgacg 6703  
|||||  
Sbjct: 39197 gtgcacggctcacaccactacgggtatgacatccgcgaccgcatcactcggctgggtgacg 39138

Query: 6704 tgcaatacaagatggatgaggatggcttcctgaggcagcggggcggtgatatctttgagt 6763  
|||||  
Sbjct: 39137 tgcaatacaagatggatgaggatggcttcctgaggcagcggggcggtgatatctttgagt 39078

Query: 6764 acaactcagctggcctgctcatcaaggcctacaaccgggctggcagctggagtgtcaggt 6823  
|||||  
Sbjct: 39077 acaactcagctggcctgctcatcaaggcctacaaccgggctggcagctggagtgtcaggt 39018

Query: 6824 accgctacgatggcctggggcggcgctgtccagcaagagcagccacagccaccacctgc 6883  
|||||  
Sbjct: 39017 accgctacgatggcctggggcggcgctgtccagcaagagcagccacagccaccacctgc 38958

Query: 6884 agttcttctatgcagacctgaccaacccaccaaggtcacccacctgtacaaccactcca 6943  
|||||  
Sbjct: 38957 agttcttctatgcagacctgaccaacccaccaaggtcacccacctgtacaaccactcca 38898

Query: 6944 gctctgagatcacctccctctactacgacttgcaaggacacctctttgccatggagctga 7003  
|||||  
Sbjct: 38897 gctctgagatcacctccctctactacgacttgcaaggacacctctttgccatggagctga 38838

Query: 7004 gcagtggtgatgagttttacatagcttgtgacaacatcgggacccctcttgctgtcttta 7063  
|||||  
Sbjct: 38837 gcagtggtgatgagttttacatagcttgtgacaacatcgggacccctcttgctgtcttta 38778

Query: 7064 gtggaacaggtttgatgatcaagcaaactctgtacacagcctatggggagatctacatgg 7123  
|||||  
Sbjct: 38777 gtggaacaggtttgatgatcaagcaaactctgtacacagcctatggggagatctacatgg 38718

Query: 7124 ataccaaccccaactttcagatcatcataggctaccatgggtggcctctatgatccactca 7183  
|||||  
Sbjct: 38717 ataccaaccccaactttcagatcatcataggctaccatgggtggcctctatgatccactca 38658

Query: 7184 ccaagcttgtccacatggggccggcgagattatgatgtgctggccggacgctggactagcc 7243  
|||||  
Sbjct: 38657 ccaagcttgtccacatggggccggcgagattatgatgtgctggccggacgctggactagcc 38598

Query: 7244 cagaccacgagctgtggaagcaccttagtagcagcaacgtcatgccttttaactctctata 7303  
|||||  
Sbjct: 38597 cagaccacgagctgtggaagcaccttagtagcagcaacgtcatgccttttaactctctata 38538

Query: 7304 tgttcaaaaacaacaaccccatcagcaactcccaggacatcaagtgttcatgacag 7360  
|||||  
Sbjct: 38537 tgttcaaaaacaacaaccccatcagcaactcccaggacatcaagtgttcatgacag 38481

Score = 1752 bits (884), Expect = 0.0  
Identities = 884/884 (100%)  
Strand = Plus / Minus

Query: 4159 caggttcacctggagtggtggccacagacttagccatcaacccaatggacaactcactttat 4218  
|||||  
Sbjct: 71950 caggttcacctggagtggtggccacagacttagccatcaacccaatggacaactcactttat 71891

Query: 4219 gtcctcgacaacaatgtgggtcctgcaaactctctgaaaaccaccagggtgcgcattgtcgcc 4278  
|||||  
Sbjct: 71890 gtcctcgacaacaatgtgggtcctgcaaactctctgaaaaccaccagggtgcgcattgtcgcc 71831

Query: 4279 gggaggcccatgcactgccaggtccttggcattgaccacttcctgctaagcaaggtggcc 4338  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71830 gggaggcccatgcactgccaggtccttggcattgaccacttcctgctaagcaaggtggcc 71771

Query: 4339 atccacgcaaccctggagtcagccaccgctttggctgtttcacacaatggggtcctgtat 4398  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71770 atccacgcaaccctggagtcagccaccgctttggctgtttcacacaatggggtcctgtat 71711

Query: 4399 attgctgagactgatgagaaaaagatcaaccgcatcaggcaggtcaccactagtggagag 4458  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71710 attgctgagactgatgagaaaaagatcaaccgcatcaggcaggtcaccactagtggagag 71651

Query: 4459 atctcactcgttgctggggcccccagtggtgtgactgtaaaaatgatgccaaactgtgat 4518  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71650 atctcactcgttgctggggcccccagtggtgtgactgtaaaaatgatgccaaactgtgat 71591

Query: 4519 tgtttttctggagacgatgggttatgccaaaggatgcaaagttaaataccccatcttccttg 4578  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71590 tgtttttctggagacgatgggttatgccaaaggatgcaaagttaaataccccatcttccttg 71531

Query: 4579 gctgtgtgtgctgatggggagctctacgtggccgaccttgggaacatccgaattcggttt 4638  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71530 gctgtgtgtgctgatggggagctctacgtggccgaccttgggaacatccgaattcggttt 71471

Query: 4639 atccggaagaacaagcctttcctcaacacccagaacatgtatgagctgtcttcaccaatt 4698  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71470 atccggaagaacaagcctttcctcaacacccagaacatgtatgagctgtcttcaccaatt 71411

Query: 4699 gaccaggagctctatctgtttgataaccacgggcaagcacctgtacacccaaagcctgccc 4758  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71410 gaccaggagctctatctgtttgataaccacgggcaagcacctgtacacccaaagcctgccc 71351

Query: 4759 acaggagactacctgtacaacttcacctacactggggacggcgacatcacactcatcaca 4818  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71350 acaggagactacctgtacaacttcacctacactggggacggcgacatcacactcatcaca 71291

Query: 4819 gacaacaatggcaacatggtaaagtccgccgagactctactgggatgcccctctggctg 4878  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71290 gacaacaatggcaacatggtaaagtccgccgagactctactgggatgcccctctggctg 71231

Query: 4879 gtggtcccagatggccagggtgtactgggtgaccatgggacaccaacagtgcactcaagagt 4938  
 ||||||||||||||||||||||||||||||||||||||||||||||||||||||||  
 Sbjct: 71230 gtggtcccagatggccagggtgtactgggtgaccatgggacaccaacagtgcactcaagagt 71171

Query: 4939 gtgaccacacaaggacacgagttggccatgatgacataccatggcaattccggccttctg 4998  
|||||  
Sbjct: 71170 gtgaccacacaaggacacgagttggccatgatgacataccatggcaattccggccttctg 71111

Query: 4999 gcaacccaaaagcaatgaaaacggatggacaacattttatgagta 5042  
|||||  
Sbjct: 71110 gcaacccaaaagcaatgaaaacggatggacaacattttatgagta 71067

Score = 1509 bits (761), Expect = 0.0  
Identities = 761/761 (100%)  
Strand = Plus / Minus

Query: 7502 agtctatcctcggggtacagtgtgaagtacagaagcagctcaaggcctttgtcaccttag 7561  
|||||  
Sbjct: 28362 agtctatcctcggggtacagtgtgaagtacagaagcagctcaaggcctttgtcaccttag 28303

Query: 7562 aacggtttgaccagctctatggctccacaatcaccagctgccagcaggctccaaagacca 7621  
|||||  
Sbjct: 28302 aacggtttgaccagctctatggctccacaatcaccagctgccagcaggctccaaagacca 28243

Query: 7622 agaagtttgcatccagcgggtcagtcctttggcaagggggtcaagtttgccttgaaggatg 7681  
|||||  
Sbjct: 28242 agaagtttgcatccagcgggtcagtcctttggcaagggggtcaagtttgccttgaaggatg 28183

Query: 7682 gccgagtgaccacagacatcatcagtggtggccaatgaggatgggcgaagggttgctgcc 7741  
|||||  
Sbjct: 28182 gccgagtgaccacagacatcatcagtggtggccaatgaggatgggcgaagggttgctgcc 28123

Query: 7742 tcttgaaccatgccactacctagagaacctgcacttcaccattgatggggtggataccc 7801  
|||||  
Sbjct: 28122 tcttgaaccatgccactacctagagaacctgcacttcaccattgatggggtggataccc 28063

Query: 7802 attactttgtgaaaccaggaccttcagaagggtgacctggccatcctgggcctcagtgggg 7861  
|||||  
Sbjct: 28062 attactttgtgaaaccaggaccttcagaagggtgacctggccatcctgggcctcagtgggg 28003

Query: 7862 ggcggcgaaccctggagaatggggtcaacgtcactgtgtcccagatcaacacagtactta 7921  
|||||  
Sbjct: 28002 ggcggcgaaccctggagaatggggtcaacgtcactgtgtcccagatcaacacagtactta 27943

Query: 7922 atggcaggactagacgctacacagacatccagctccagtacggggcactgtgcttgaaca 7981  
|||||  
Sbjct: 27942 atggcaggactagacgctacacagacatccagctccagtacggggcactgtgcttgaaca 27883

Query: 7982 cacgctacgggacaacggttgatgaggagaaggcacgggtcctggagctggccccggcaga 8041  
|||||  
Sbjct: 27882 cacgctacgggacaacggttgatgaggagaaggcacgggtcctggagctggccccggcaga 27823

Query: 8042 gagccgtgcgccaagcgtgggccccgcgagcagcagagactgcgggaaggggaggaaggcc 8101  
|||||  
Sbjct: 27822 gagccgtgcgccaagcgtgggccccgcgagcagcagagactgcgggaaggggaggaaggcc 27763

Query: 8102 tgcgggcctggacagagggggagaagcagcaggtgctgagcacagggcggggtgcaaggct 8161  
|||||  
Sbjct: 27762 tgcgggcctggacagagggggagaagcagcaggtgctgagcacagggcggggtgcaaggct 27703

Query: 8162 acgacggctttttcgtgatctctgtcgagcagtaccagaactgtcagacagcgccaaca 8221  
|||||  
Sbjct: 27702 acgacggctttttcgtgatctctgtcgagcagtaccagaactgtcagacagcgccaaca 27643

Query: 8222 acatccacttcatgagacagagcgagatgggcccggaggtga 8262  
|||||  
Sbjct: 27642 acatccacttcatgagacagagcgagatgggcccggaggtga 27602

Score = 591 bits (298), Expect = e-165  
Identities = 298/298 (100%)  
Strand = Plus / Minus

Query: 5448 gggttcacaaccgaaatctcctatctctggactttgatcgcgtaacacgcacagagaagat 5507  
|||||  
Sbjct: 41874 gggttcacaaccgaaatctcctatctctggactttgatcgcgtaacacgcacagagaagat 41815

Query: 5508 ctatgatgaccaccgcaagttcacccttcggattctgtacgaccaggcgggggcgcccg 5567  
|||||  
Sbjct: 41814 ctatgatgaccaccgcaagttcacccttcggattctgtacgaccaggcgggggcgcccg 41755

Query: 5568 cctctgggtcaccacagcagcaggctgaatgggtgtcaacgtgacatactcccctgggggtta 5627  
|||||  
Sbjct: 41754 cctctgggtcaccacagcagcaggctgaatgggtgtcaacgtgacatactcccctgggggtta 41695

Query: 5628 cattgctggcatccagaggggcatcatgtctgaaagaatggaatacgaccaggcgggccg 5687  
|||||  
Sbjct: 41694 cattgctggcatccagaggggcatcatgtctgaaagaatggaatacgaccaggcgggccg 41635

Query: 5688 catcacatccaggatcttcgctgatgggaagacatggagctacacatacttagagaag 5745  
|||||  
Sbjct: 41634 catcacatccaggatcttcgctgatgggaagacatggagctacacatacttagagaag 41577

Score = 535 bits (270), Expect = e-148  
Identities = 270/270 (100%)  
Strand = Plus / Minus

Query: 3110 aggcctttgcaggaggaaatctctatctctggctgcaagatgaggctgagctacctgagca 3169  
|||||

Sbjct: 99189 aggcctttgcaggaggaaatctctatctctggctgcaagatgaggctgagctacctgagca 99130

Query: 3170 gccggacccctggctacaaatctgtcctgaggatcagcctcaccacccgaccatcccct 3229  
|||||

Sbjct: 99129 gccggacccctggctacaaatctgtcctgaggatcagcctcaccacccgaccatcccct 99070

Query: 3230 tcaacctcatgaaggtgcacctcatggtagcggtggagggccgcctcttcaggaagtgg 3289  
|||||

Sbjct: 99069 tcaacctcatgaaggtgcacctcatggtagcggtggagggccgcctcttcaggaagtgg 99010

Query: 3290 tcgctgcagccccagacctgtcctattatttcatttgggacaagacagacgtctacaacc 3349  
|||||

Sbjct: 99009 tcgctgcagccccagacctgtcctattatttcatttgggacaagacagacgtctacaacc 98950

Query: 3350 agaaggtgtttgggctttcagaagcctttg 3379  
|||||

Sbjct: 98949 agaaggtgtttgggctttcagaagcctttg 98920

Score = 527 bits (266), Expect = e-146  
Identities = 266/266 (100%)  
Strand = Plus / Minus

Query: 2847 cagctttgacttggtgacaaatggcggcacatctccatcatcctgcggttcgagcgggcacc 2906  
|||||

Sbjct: 102124 cagctttgacttggtgacaaatggcggcacatctccatcatcctgcggttcgagcgggcacc 102065

Query: 2907 tttcatcacacaggagcacaccctgtggctgccatgggatcgcttctttgtcatggaaac 2966  
|||||

Sbjct: 102064 tttcatcacacaggagcacaccctgtggctgccatgggatcgcttctttgtcatggaaac 102005

Query: 2967 catcatcatgagacatgaggagaatgagattcccagctgtgacctgagcaattttgcccc 3026  
|||||

Sbjct: 102004 catcatcatgagacatgaggagaatgagattcccagctgtgacctgagcaattttgcccc 101945

Query: 3027 ccccaacccagtcgtctctccatccccactgacgtccttcgccagctcctgtgcagagaa 3086  
|||||

Sbjct: 101944 ccccaacccagtcgtctctccatccccactgacgtccttcgccagctcctgtgcagagaa 101885

Query: 3087 aggccccattgtgccggaattcagg 3112  
|||||  
Sbjct: 101884 aggccccattgtgccggaattcagg 101859

Score = 498 bits (251), Expect = e-137  
Identities = 251/251 (100%)  
Strand = Plus / Minus

Query: 3523 ggcacacctgcacaaaggggaatggggagaaccagtttgtgtctcagcagcctcctgtcatt 3582  
|||||  
Sbjct: 92462 ggcacacctgcacaaaggggaatggggagaaccagtttgtgtctcagcagcctcctgtcatt 92403

Query: 3583 gggagcatcatgggcaatgggcgccggagaagcatctcctgccccagctgcaacggcctt 3642  
|||||  
Sbjct: 92402 gggagcatcatgggcaatgggcgccggagaagcatctcctgccccagctgcaacggcctt 92343

Query: 3643 gctgacggcaacaagctcctggccccagtgccctcacctgtggctctgacgggagcctc 3702  
|||||  
Sbjct: 92342 gctgacggcaacaagctcctggccccagtgccctcacctgtggctctgacgggagcctc 92283

Query: 3703 tatgtgggtgatttcaactacattagaaggatcttccccctctggaaatgtcaccaacatc 3762  
|||||  
Sbjct: 92282 tatgtgggtgatttcaactacattagaaggatcttccccctctggaaatgtcaccaacatc 92223

Query: 3763 ctagagctgag 3773  
|||||  
Sbjct: 92222 ctagagctgag 92212

Score = 476 bits (240), Expect = e-130  
Identities = 244/245 (99%), Gaps = 1/245 (0%)  
Strand = Plus / Minus

Query: 5206 ctgcaagaccaagtccggaacagctactacatcggggccgatggctccttgcggtgctg 5265  
|||||  
Sbjct: 45937 ctgc-agaccaagtccggaacagctactacatcggggccgatggctccttgcggtgctg 45879

Query: 5266 ctggccaacggcatggaggtggcgctgcagactgagccccacttgctggctggcaccgtc 5325  
|||||  
Sbjct: 45878 ctggccaacggcatggaggtggcgctgcagactgagccccacttgctggctggcaccgtc 45819

Query: 5326 aacccccaccgtgggcaagaggaatgtcacgctgcccatcgacaacggcctcaacctggtg 5385  
|||||  
Sbjct: 45818 aacccccaccgtgggcaagaggaatgtcacgctgcccatcgacaacggcctcaacctggtg 45759



Query: 5386 gagtggcgccagcgcaaagagcaggctcggggccagggtcactgtctttgggcgccggctg 5445  
|||||  
Sbjct: 45758 gagtggcgccagcgcaaagagcaggctcggggccagggtcactgtctttgggcgccggctg 45699

Query: 5446 cgggt 5450  
|||||  
Sbjct: 45698 cgggt 45694

Score = 468 bits (236), Expect = e-128  
Identities = 236/236 (100%)  
Strand = Plus / Minus

Query: 3772 agtcacagtccagcacacaaaatactacctggccacagaccccatgagtgggggccgtcttc 3831  
|||||  
Sbjct: 82260 agtcacagtccagcacacaaaatactacctggccacagaccccatgagtgggggccgtcttc 82201

Query: 3832 ctttctgacagcaacagccggcggggtctttaaaatcaagtccactgtggtggtgaaggac 3891  
|||||  
Sbjct: 82200 ctttctgacagcaacagccggcggggtctttaaaatcaagtccactgtggtggtgaaggac 82141

Query: 3892 cttgtcaagaactctgaggtggttgcggggacaggtgaccagtgcctcccctttgatgac 3951  
|||||  
Sbjct: 82140 cttgtcaagaactctgaggtggttgcggggacaggtgaccagtgcctcccctttgatgac 82081

Query: 3952 actcgctgcggggatggtgggaaggccacagaagccacactcaccaatcccagggg 4007  
|||||  
Sbjct: 82080 actcgctgcggggatggtgggaaggccacagaagccacactcaccaatcccagggg 82025

Score = 436 bits (220), Expect = e-118  
Identities = 220/220 (100%)  
Strand = Plus / Minus

Query: 2511 agatggcctggtggactgcatggaccctgactgctgcctccagcccctgtgccatatcaa 2570  
|||||  
Sbjct: 126567 agatggcctggtggactgcatggaccctgactgctgcctccagcccctgtgccatatcaa 126508

Query: 2571 cccgctgtgccttggctcccctaaccctctggacatcatccaggagacacaggtccctgt 2630  
|||||  
Sbjct: 126507 cccgctgtgccttggctcccctaaccctctggacatcatccaggagacacaggtccctgt 126448

Query: 2631 gtcacagcagaacctacactccttctatgaccgcatcaagttcctcgtagggcagggacag 2690  
|||||  
Sbjct: 126447 gtcacagcagaacctacactccttctatgaccgcatcaagttcctcgtagggcagggacag 126388

Query: 2691 cacgcacataatccccgggggagaacccctttgatggaggg 2730  
|||||  
Sbjct: 126387 cacgcacataatccccgggggagaacccctttgatggaggg 126348

Score = 402 bits (203), Expect = e-108  
Identities = 203/203 (100%)  
Strand = Plus / Minus

Query: 1977 agtggactgcatggacccccacatgttcaggccggggtgtctgcgtgagaggcgaatgcca 2036  
|||||  
Sbjct: 175038 agtggactgcatggacccccacatgttcaggccggggtgtctgcgtgagaggcgaatgcca 174979

Query: 2037 ctgctctgtgggatggggaggcaccaactgagagacccccaggggccacatgcttagacca 2096  
|||||  
Sbjct: 174978 ctgctctgtgggatggggaggcaccaactgagagacccccaggggccacatgcttagacca 174919

Query: 2097 gtgttcaggccacggaaccttctcccggacaccgggctttgcagctgtgacccaagctg 2156  
|||||  
Sbjct: 174918 gtgttcaggccacggaaccttctcccggacaccgggctttgcagctgtgacccaagctg 174859

Query: 2157 gactggacacgactgttctatcg 2179  
|||||  
Sbjct: 174858 gactggacacgactgttctatcg 174836

Score = 391 bits (197), Expect = e-105  
Identities = 197/197 (100%)  
Strand = Plus / Minus

Query: 1782 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 1841  
|||||  
Sbjct: 181862 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 181803

Query: 1842 ccacagtggctggaaaggcgctgagtgcgatgtgcccaccaaccagtgtatcgatgtggc 1901  
|||||  
Sbjct: 181802 ccacagtggctggaaaggcgctgagtgcgatgtgcccaccaaccagtgtatcgatgtggc 181743

Query: 1902 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaaggg 1961  
|||||  
Sbjct: 181742 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaaggg 181683

Query: 1962 cgagagctgtgaggaag 1978  
|||||  
Sbjct: 181682 cgagagctgtgaggaag 181666

Score = 371 bits (187), Expect = 5e-99  
Identities = 187/187 (100%)  
Strand = Plus / Minus

Query: 2179 gagatctgtgctgccgactgtggtggccatggcgtgtgcgtagggggcacctgccgctgc 2238  
|||||  
Sbjct: 156628 gagatctgtgctgccgactgtggtggccatggcgtgtgcgtagggggcacctgccgctgc 156569

Query: 2239 gaggatggctggatgggggcagcctgcgaccagcgggcctgccacccgcgctgtgccgag 2298  
|||||  
Sbjct: 156568 gaggatggctggatgggggcagcctgcgaccagcgggcctgccacccgcgctgtgccgag 156509

Query: 2299 catgggacctgccgcgacggcaagtgcgagtgcagccctggctggaatggcgaacactgc 2358  
|||||  
Sbjct: 156508 catgggacctgccgcgacggcaagtgcgagtgcagccctggctggaatggcgaacactgc 156449

Query: 2359 accatcg 2365  
|||||  
Sbjct: 156448 accatcg 156442

Score = 343 bits (173), Expect = 1e-90  
Identities = 173/173 (100%)  
Strand = Plus / Minus

Query: 5040 gtacgacagctttggccgcctgacaaatgtgaccttccctactggccagggtgagcagttt 5099  
|||||  
Sbjct: 57770 gtacgacagctttggccgcctgacaaatgtgaccttccctactggccagggtgagcagttt 57711

Query: 5100 ccgaagtgatacagacagttcagtgcatgtccaggtagagacctccagcaaggatgatgt 5159  
|||||  
Sbjct: 57710 ccgaagtgatacagacagttcagtgcatgtccaggtagagacctccagcaaggatgatgt 57651

Query: 5160 caccataaccaccaacctgtctgcctcaggcgccttctacacactgctgcaag 5212  
|||||  
Sbjct: 57650 caccataaccaccaacctgtctgcctcaggcgccttctacacactgctgcaag 57598

Score = 313 bits (158), Expect = 1e-81  
Identities = 158/158 (100%)  
Strand = Plus / Minus

Query: 4006 ggcatcagtgagacaagtttgggctgatctacttcgtggatggcaccatgatcagacgc 4065  
|||||  
Sbjct: 78060 ggcatcagtgagacaagtttgggctgatctacttcgtggatggcaccatgatcagacgc 78001

Query: 4066 atcgatcagaatgggatcatctccaccctgctcggctctaatagatctcacatcagcccgg 4125  
|||||  
Sbjct: 78000 atcgatcagaatgggatcatctccaccctgctcggctctaatagatctcacatcagcccgg 77941

Query: 4126 ccactcagctgtgattctgtcatggatatttcccaggt 4163  
|||||  
Sbjct: 77940 ccactcagctgtgattctgtcatggatatttcccaggt 77903

Score = 293 bits (148), Expect = 9e-76  
Identities = 148/148 (100%)  
Strand = Plus / Minus

Query: 2365 gaggggtgccctgggttgatgcaatggcaacggcagatgtaccttagacctgaatggttgg 2424  
|||||  
Sbjct: 140683 gaggggtgccctgggttgatgcaatggcaacggcagatgtaccttagacctgaatggttgg 140624

Query: 2425 cactgcgtctgccagctgggctggagaggagctggctgtgacacttccatggagactgcc 2484  
|||||  
Sbjct: 140623 cactgcgtctgccagctgggctggagaggagctggctgtgacacttccatggagactgcc 140564

Query: 2485 tgcggtgacagcaaagacaatgatggag 2512  
|||||  
Sbjct: 140563 tgcggtgacagcaaagacaatgatggag 140536

Score = 289 bits (146), Expect = 1e-74  
Identities = 146/146 (100%)  
Strand = Plus / Minus

Query: 3379 gtttccgtgggttatgaatatgaatcctgccagatctaatacctgtgggaaaaaagaaca 3438  
|||||  
Sbjct: 95767 gtttccgtgggttatgaatatgaatcctgccagatctaatacctgtgggaaaaaagaaca 95708

Query: 3439 acagtgcctgcagggctatgaaattgacgcgtccaagcttggaggatggagcctagacaaa 3498  
|||||  
Sbjct: 95707 acagtgcctgcagggctatgaaattgacgcgtccaagcttggaggatggagcctagacaaa 95648

Query: 3499 catcatgccctcaacattcaaagtgg 3524  
|||||  
Sbjct: 95647 catcatgccctcaacattcaaagtgg 95622

Score = 281 bits (142), Expect = 3e-72  
Identities = 145/146 (99%)  
Strand = Plus / Minus

Query: 7358 cagatgttaacagctggctgctcacctttggattccagctacacaacgtgatccctgggtt 7417  
|||||

Sbjct: 31138 cagatgttaacagctggctgctcacctttggattccagctacacaacgtgatccctgggtt 31079

Query: 7418 atcccaaaccagacatggatgccatggaaccctcctacgagcttatccacacacagatga 7477  
|||||

Sbjct: 31078 atcccaaaccagacatggatgccatggaaccctcctacgagctcatccacacacagatga 31019

Query: 7478 aaacgcaggagtgggacaacagcaag 7503  
|||||

Sbjct: 31018 aaacgcaggagtgggacaacagcaag 30993

Score = 240 bits (121), Expect = 1e-59  
Identities = 121/121 (100%)  
Strand = Plus / Minus

Query: 2729 ggcattgcttggttatttcgtggccaagtgatgacatcagatggaacccccctgggttggtg 2788  
|||||

Sbjct: 108115 ggcattgcttggttatttcgtggccaagtgatgacatcagatggaacccccctgggttggtg 108056

Query: 2789 tgaacatcagttttgtcaataaccctctctttggatatacaatcagcaggcaagatggca 2848  
|||||

Sbjct: 108055 tgaacatcagttttgtcaataaccctctctttggatatacaatcagcaggcaagatggca 107996

Query: 2849 g 2849  
|

Sbjct: 107995 g 107995

Score = 204 bits (103), Expect = 6e-49  
Identities = 103/103 (100%)  
Strand = Plus / Minus

Query: 1681 gagtcggtggataactgccccagcaactgctatggcaatggtgactgcattctctgggacc 1740  
|||||

Sbjct: 183940 gagtcggtggataactgccccagcaactgctatggcaatggtgactgcattctctgggacc 183881

Query: 1741 tgccactgcttcctgggtttcctgggccccgactgtggcagag 1783  
|||||

Sbjct: 183880 tgccactgcttcctgggtttcctgggccccgactgtggcagag 183838

>AP002957.2.1.87834  
Length = 87834

Score = 541 bits (273), Expect = e-150  
Identities = 273/273 (100%)  
Strand = Plus / Minus

Query: 221 caggtgccaaacttcaccctgcgggagctggggctggaagaagtaacgccccctcacggga 280  
|||||  
Sbjct: 39273 caggtgccaaacttcaccctgcgggagctggggctggaagaagtaacgccccctcacggga 39214

Query: 281 ccctgtaccggacagacattggcctccccactgcggctactccatgggggctggctctg 340  
|||||  
Sbjct: 39213 ccctgtaccggacagacattggcctccccactgcggctactccatgggggctggctctg 39154

Query: 341 atgccgacatggaggctgacacggtgctgtcccctgagcacccccgtgcgtctgtggggcc 400  
|||||  
Sbjct: 39153 atgccgacatggaggctgacacggtgctgtcccctgagcacccccgtgcgtctgtggggcc 39094

Query: 401 ggagcacacggtcagggcgcagctcctgcctgtccagccggggccaattccaatctcacac 460  
|||||  
Sbjct: 39093 ggagcacacggtcagggcgcagctcctgcctgtccagccggggccaattccaatctcacac 39034

Query: 461 tcaccgacaccgagcatgaaaacactgagactg 493  
|||||  
Sbjct: 39033 tcaccgacaccgagcatgaaaacactgagactg 39001

Score = 446 bits (225), Expect = e-121  
Identities = 225/225 (100%)  
Strand = Plus / Minus

Query: 1 atggacgtgaaggagaggaagccttaccgctcgctgacccggcgccgcgacgccgagcgc 60  
|||||  
Sbjct: 44207 atggacgtgaaggagaggaagccttaccgctcgctgacccggcgccgcgacgccgagcgc 44148

Query: 61 cgctacaccagctcgtccgcggacagcgaggagggcaaagccccgcagaaatcgtaacgc 120  
|||||  
Sbjct: 44147 cgctacaccagctcgtccgcggacagcgaggagggcaaagccccgcagaaatcgtaacgc 44088

Query: 121 tccagcgagaccctgaaggcctacgaccaggacgcccgcctagcctatggcagccgcgtc 180  
|||||  
Sbjct: 44087 tccagcgagaccctgaaggcctacgaccaggacgcccgcctagcctatggcagccgcgtc 44028

Query: 181 aaggacattgtgccgcaggaggccgaggaattctgccgcacaggt 225  
|||||  
Sbjct: 44027 aaggacattgtgccgcaggaggccgaggaattctgccgcacaggt 43983

>AP002515.3.1.166063  
Length = 166063

Score = 509 bits (257), Expect = e-141  
Identities = 257/257 (100%)  
Strand = Plus / Minus

Query: 493 gatcatccgggcggcctgcagaaccacgcgcggctccggacgccgccgccgctctcg 552  
|||||  
Sbjct: 111721 gatcatccgggcggcctgcagaaccacgcgcggctccggacgccgccgccgctctcg 111662

Query: 553 cacgcccacaccccccaaccagcaccacgcggcctccattaactccctgaaccggggcaac 612  
|||||  
Sbjct: 111661 cacgcccacaccccccaaccagcaccacgcggcctccattaactccctgaaccggggcaac 111602

Query: 613 ttcacgccgaggagcaacccccagcccgccccccacggaccactcgctctccggagagccc 672  
|||||  
Sbjct: 111601 ttcacgccgaggagcaacccccagcccgccccccacggaccactcgctctccggagagccc 111542

Query: 673 cctgccggcgggcgcccaggagcctgccacgccccaggagaactggctgctcaacagcaac 732  
|||||  
Sbjct: 111541 cctgccggcgggcgcccaggagcctgccacgccccaggagaactggctgctcaacagcaac 111482

Query: 733 atccccctggagaccag 749  
|||||  
Sbjct: 111481 atccccctggagaccag 111465

Score = 470 bits (237), Expect = e-129  
Identities = 237/237 (100%)  
Strand = Plus / Minus

Query: 848 ggcacttcctcttcaagcctggaggcacctccccgctcttctgcaccacatcaccagggt 907  
|||||  
Sbjct: 98218 ggcacttcctcttcaagcctggaggcacctccccgctcttctgcaccacatcaccagggt 98159

Query: 908 acccactgacgtccagcacagtgtactctcctccgccccgacctgccccgcagcacct 967  
|||||  
Sbjct: 98158 acccactgacgtccagcacagtgtactctcctccgccccgacctgccccgcagcacct 98099

Query: 968 tcgcccggccggcctttaacctcaagaagccctccaagtactgtaactggaagtgcgcag 1027  
|||||  
Sbjct: 98098 tcgcccggccggcctttaacctcaagaagccctccaagtactgtaactggaagtgcgcag 98039

Query: 1028 ccctgagcgccatcggtcatctcagccactctgggtcatcctgctggcatactttgtgg 1084  
|||||  
Sbjct: 98038 ccctgagcgccatcggtcatctcagccactctgggtcatcctgctggcatactttgtgg 97982

Score = 430 bits (217), Expect = e-117  
Identities = 217/217 (100%)  
Strand = Plus / Minus

Query: 1254 aggaaagcccagtagtttctttccagaggacagtttcatagattctggagaaattgatgt 1313  
|||||  
Sbjct: 64377 aggaaagcccagtagtttctttccagaggacagtttcatagattctggagaaattgatgt 64318

Query: 1314 gggaaaggcgagcttcccagaagattcctcctggcactttctggagatctcaagtgttcat 1373  
|||||  
Sbjct: 64317 gggaaaggcgagcttcccagaagattcctcctggcactttctggagatctcaagtgttcat 64258

Query: 1374 agaccatcctgtgcatctgaaattcaatgtgtctctgggaaaggcagccctggttggcat 1433  
|||||  
Sbjct: 64257 agaccatcctgtgcatctgaaattcaatgtgtctctgggaaaggcagccctggttggcat 64198

Query: 1434 ttatggcagaaaaggcctccctccttcacatacacag 1470  
|||||  
Sbjct: 64197 ttatggcagaaaaggcctccctccttcacatacacag 64161

Score = 424 bits (214), Expect = e-115  
Identities = 214/214 (100%)  
Strand = Plus / Minus

Query: 1468 cagtttgactttgtggagctgctggatggcaggaggctcctaaccaggaggcgcgaggc 1527  
|||||  
Sbjct: 62514 cagtttgactttgtggagctgctggatggcaggaggctcctaaccaggaggcgcgaggc 62455

Query: 1528 ctagaggggaccccgccagtcctcggggaactgtgccccctccagccatgagacaggc 1587  
|||||  
Sbjct: 62454 ctagaggggaccccgccagtcctcggggaactgtgccccctccagccatgagacaggc 62395

Query: 1588 ttcatccagtatatttgattcaggaatctggcacttggctttttacaatgacggaaaggag 1647  
|||||  
Sbjct: 62394 ttcatccagtatatttgattcaggaatctggcacttggctttttacaatgacggaaaggag 62335

Query: 1648 tcagaagtggtttctttctcaccactgccattg 1681  
|||||  
Sbjct: 62334 tcagaagtggtttctttctcaccactgccattg 62301



Score = 402 bits (203), Expect = e-108  
Identities = 203/203 (100%)  
Strand = Plus / Minus

Query: 1977 agtggactgcatggacccccacatgttcaggccgggggtgtctgcgtgagaggcgaatgcca 2036  
|||||  
Sbjct: 13691 agtggactgcatggacccccacatgttcaggccgggggtgtctgcgtgagaggcgaatgcca 13632

Query: 2037 ctgctctgtgggatggggaggcaccaactgcgagacccccaggggccacatgcttagacca 2096  
|||||  
Sbjct: 13631 ctgctctgtgggatggggaggcaccaactgcgagacccccaggggccacatgcttagacca 13572

Query: 2097 gtgttcaggccacggaaccttcctcccgacaccgggctttgcagctgtgacccaagctg 2156  
|||||  
Sbjct: 13571 gtgttcaggccacggaaccttcctcccgacaccgggctttgcagctgtgacccaagctg 13512

Query: 2157 gactggacacgactgttctatcg 2179  
|||||  
Sbjct: 13511 gactggacacgactgttctatcg 13489

Score = 391 bits (197), Expect = e-105  
Identities = 197/197 (100%)  
Strand = Plus / Minus

Query: 1782 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 1841  
|||||  
Sbjct: 20515 agcctcctgccccgtgctctgtagcggaaatggccaatacatgaaaggcagatgcttgtg 20456

Query: 1842 ccacagtggctggaaaggcgctgagtgcgatgtgccaccaaccagtgtatcgatgtggc 1901  
|||||  
Sbjct: 20455 ccacagtggctggaaaggcgctgagtgcgatgtgccaccaaccagtgtatcgatgtggc 20396

Query: 1902 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaagg 1961  
|||||  
Sbjct: 20395 ctgcagcaaccatggcacctgcatcacgggcacctgcatctgcaaccctggctacaagg 20336

Query: 1962 cgagagctgtgaggaag 1978  
|||||  
Sbjct: 20335 cgagagctgtgaggaag 20319

Score = 343 bits (173), Expect = 1e-90  
Identities = 173/173 (100%)  
Strand = Plus / Minus

Query: 1084 gccatgcacctgtttggcctaaactggcacctgcagccgatggaggggcagatgtatgag 1143  
|||||  
Sbjct: 71330 gccatgcacctgtttggcctaaactggcacctgcagccgatggaggggcagatgtatgag 71271

Query: 1144 atcacggaggacacagccagcagttggcctgtgccaaaccgacgtctccctataaccctca 1203  
|||||  
Sbjct: 71270 atcacggaggacacagccagcagttggcctgtgccaaaccgacgtctccctataaccctca 71211

Query: 1204 gggggcactggccttagagaccctgacaggaaaggcaaaggaaccacagaagg 1256  
|||||  
Sbjct: 71210 gggggcactggccttagagaccctgacaggaaaggcaaaggaaccacagaagg 71158

Score = 204 bits (103), Expect = 6e-49  
Identities = 103/103 (100%)  
Strand = Plus / Minus


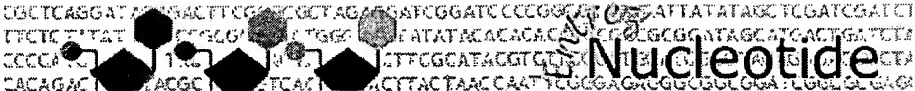
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Query: 1741 tgccactgcttcctgggtttcctgggccccgactgtggcagag 1783  
|||||  
Sbjct: 22533 tgccactgcttcctgggtttcctgggccccgactgtggcagag 22491

Score = 202 bits (102), Expect = 3e-48  
Identities = 102/102 (100%)  
Strand = Plus / Minus

Query: 748 agaaacctaggcaagcagccattcctagggacattgcaggacaacctcattgagatggac 807  
|||||  
Sbjct: 99535 agaaacctaggcaagcagccattcctagggacattgcaggacaacctcattgagatggac 99476

Query: 808 attctcggcgccctcccgccatgatggggcttacagtgcgagg 849  
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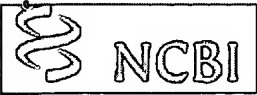
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 ACCESSION AP002768  
 VERSION AP002768.3 GI:13429926  
 KEYWORDS HTG.  
 SOURCE Homo sapiens (human)  
 ORGANISM Homo sapiens  
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  
 REFERENCE 1  
 AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.  
 TITLE Homo sapiens genomic DNA  
 JOURNAL Published Only in Database (2000)  
 REFERENCE 2 (bases 1 to 186084)  
 AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.  
 TITLE Direct Submission  
 JOURNAL Submitted (10-JUL-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou,Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)  
 COMMENT On Mar 21, 2001 this sequence version replaced gi:11071944.  
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301 ctgtgggtcat tgcagcggtt cagcattaga ggggtgctgta agcccaggta caatgtgact
361 cttgcagact ctttgatacc cagccctgat ggacttgggt agtacaaggg agaatttcct
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541 agctggcact gttttgggtc acacgtgaag cccatgatct cccagaccag cacagtactg
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LOCUS AP002957 87834 bp DNA linear PRI 15-MAR-2003  
 DEFINITION Homo sapiens genomic DNA, chromosome 11q, clone:CTD-2337I7, complete sequences.

ACCESSION AP002957

VERSION AP002957.2 GI:13810522

KEYWORDS HTG.

SOURCE Homo sapiens (human)

ORGANISM [Homo sapiens](#)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1

AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

TITLE Homo sapiens genomic DNA

JOURNAL Published Only in Database (2000)

REFERENCE 2 (bases 1 to 87834)

AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

TITLE Direct Submission

JOURNAL Submitted (28-NOV-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou,Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)

COMMENT On Apr 26, 2001 this sequence version replaced gi:11526584.

FEATURES Location/Qualifiers

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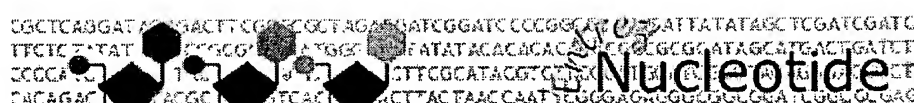
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☐ 1: [AP002515](#). Homo sapiens geno...[gi:13810521]

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LOCUS AP002515 166063 bp DNA linear PRI 15-MAR-2003

DEFINITION Homo sapiens genomic DNA, chromosome 11q, clone:CTD-3159I7, complete sequences.

ACCESSION AP002515

VERSION AP002515.3 GI:13810521

KEYWORDS HTG.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1

AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

TITLE Homo sapiens genomic DNA

JOURNAL Published Only in Database (2000)

REFERENCE 2 (bases 1 to 166063)

AUTHORS<sup>†</sup> Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.

TITLE Direct Submission

JOURNAL Submitted (13-JUN-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suehiro-chou,Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-45-503-9111, Fax:81-45-503-9170)

COMMENT On Apr 26, 2001 this sequence version replaced gi:[11136464](#).

FEATURES Location/Qualifiers

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